SIMULATES CIRCUITS.

McCAD®

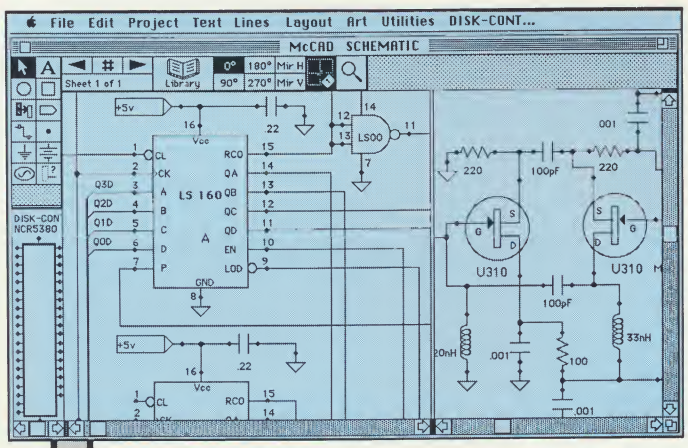
The first fully integrated CAE/CAD software that makes the Macintosh the most powerful micro-based engineering tool for electronics circuit design.

Desktop engineering for electronic design has reached a new dimension with the development of McCAD software for use with the Apple Macintosh. For the first time, the high-performance graphics capabilities of the Macintosh have been combined with a software system that gives full expression to the Macintosh's CAD potential.

McCAD's integrated family of software modules gives the designer the technical range he needs, yet at the same time provides the control and flexibility missing in many systems, including mainframes. And McCAD's economy — that is, its benefits/cost ratio — makes this CAD/CAM software the most cost-effective performer of any system on the market, any make, any size.

SCHEMATIC CAPTURE

McCAD Schematics allows the electronic designer to easily create and revise electronic circuit designs (digital and/or analog) directly on the Macintosh computer. At the touch of a finger, the user can select the components he wishes to place on the work surface and then perform a host of editing functions with ease.



- Mac User Interface
- On-Line Schematic Capture
- Busing Networks
- Net List Extraction
- Parts List Extraction
- SPICE Net List Extraction
- Multi-Page Drawings
- Multi-Page Project Management
- Interconnector Router
- Standard Libraries
- User Definable Libraries
- On-Line Library Editor
- Rubberbanding Interconnects
- Device & Text Rotation
- Intelligent Tie Point Management
- Auto-Packaging
- Auto Netting
- User Definable Report Formats
- User Definable Net Symbols
- Multiple Windows
- Import/Export Files via Clipboard
- Technical Documentation
- Area Zoom
- Much, much more

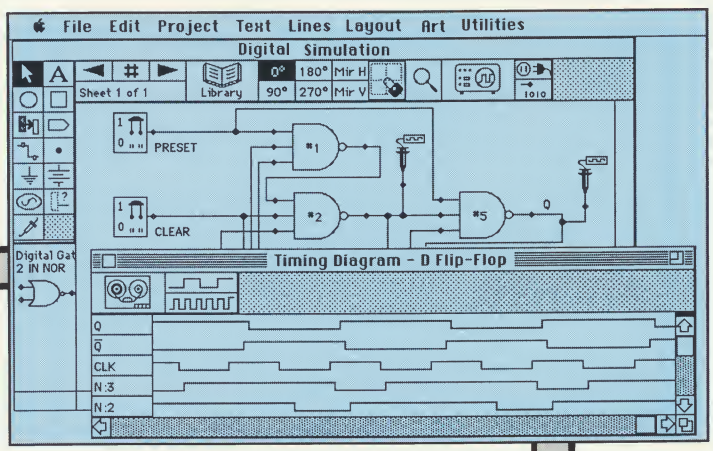
SIMULATION

(Digital)

An advanced circuit analysis tool, Schematics-DS consists of a Digital Simulator which is integrated with the McCAD Schematics package. All aspects of the Schematics application have been retained in this module. Schematics-DS gives the user who has captured his design the ability to test his creation for functionality without having to use a real-world breadboard. Circuits can be excited and their behavior recorded.

(Analog)

Extraction of SPICE data from the Schematics Module enables direct analog analysis.

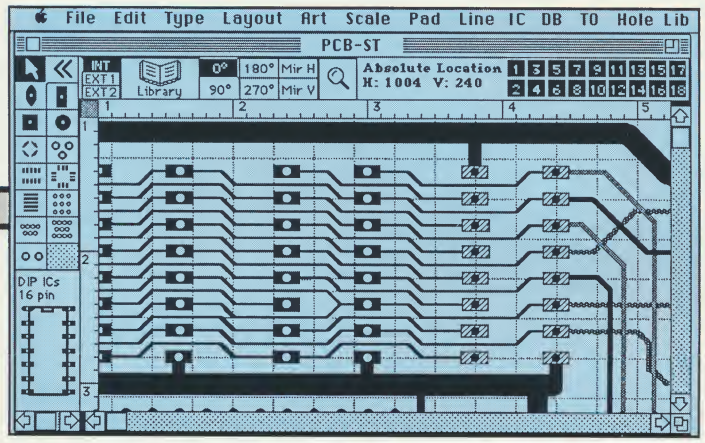


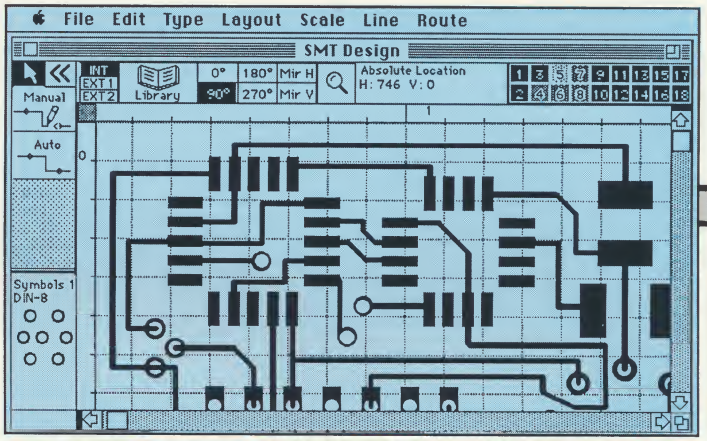
- Accurate Simulation
- On-Screen "Probes"
- On-Screen Timing Diagram
- Up to 64 Channels Monitored
- Continuous Interactive Simulation
- User Definable Propogation Delays
- Selectable Recording Modes:
  - Pre & Post Trigger Settings
  - Suspend/Resume
- User Definable Triggers
- Simulate PALs, GALs, PLDs & ASICs
- PASCAL-like Function Definition Editor
- Simulation Function Compiler

LAYOUT

(PCB and Surface Mount Technology)

McCAD's integrated layout module is a powerful, easy to use tool for designing, creating, editing and revising printed circuit board artwork. Design linkage to the Schematics module helps eliminate errors and speed layout work.





- Mac User Interface • Traditional, Hybrid & SMT Designs • Multiple Layers
- User Definable Color/Layer Settings • Extensive Artwork Libraries • Rubberbanding Traces
- Auto-Tooling Extraction • Automatic Ground Planes • Rotated Text • Multiple Windows
- User Definable Grids • Automatic Component Placement • Net List Driven
- On-line Library Editor • Programmable Menus • Global Utilities • Rotation and Mirroring
- Linear Zooming • NC Drill Files • Automatic Via Management • Import/Export Through Clipboard
- Dual English/Metric Dimensioning • Technical Documentation

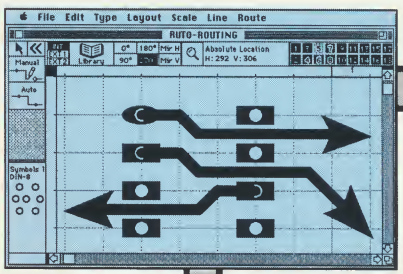
AUTO-ROUTING

A choice of Three Net List Driven Options

PCB-ST• Contains an internal Point to Point Router

TRACKER• Intermediate level Autorouter

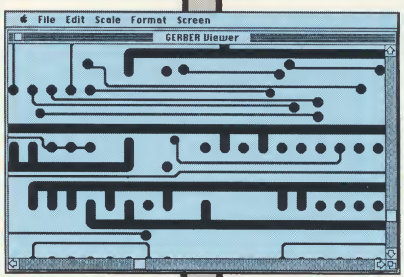
TRAILBLAZER• High performance Multilayer Autorouter using advanced Push, Shove and Rip-Up algorithms. Interactive editing. Fully re-entrant and user configurable.



GERBER MODULE

The McCAD Gerber Translator module is a utility which quickly and easily converts the McCAD PCB design data base into a standard Gerber Text Photo-Plot file for photoplotting.

- Automatic Presort & Loading of Gerber Tool D-Codes
- Separation of Draw and Flash Apertures
- Storage of up to 800 different Gerber Tool Tables
- VERBOSE and TERSE Formats
- Automatic Segmentation
- Gerber 2/3 Resolution Format



CAM SUPPORT

McCAD databases are supported by many independent photoplot and board fabrication vendors. A listing of independent service bureaus is available.

BUILT-IN OUTPUT DRIVERS: Hewlett-Packard (HPGL) and Houston Instruments (DMP) plotters, Imagewriter, Laserwriter and other Postscript devices, such as the Linotronic 300/500 printers, are supported. User definable output parameters (for plotters) include: selectable pen size, pen speed and baud rate; selectable output ports. Drawings can be positioned on the output medium. Up to 10 previously defined artwork composites can be preselected for sequenced output from layout module.

McCAD PRODUCT GUIDE

Schematics	A schematic capture package with libraries which integrates with our McCAD PCB-ST circuit layout package. This package is available as a complete stand-alone or as part of the EDS-1 package.
Schematics D.S.	A schematic capture environment which also incorporates a powerful digital behaviour modeling simulator. This package is available as a complete stand-alone or as part of the EDS-2 package
Classic SPICE	An integrated Analog simulation and analysis environment based on Berkeley Spice 2.6G. Requires math co-processor & 2 Meg of Ram.
PCB-ST	A high-end circuit board layout package which integrates with our McCAD Schematic series of software. This package also contains a point to point routing capability. This package is available as a stand-alone or as part of the EDS-1 or 2 package.
EDS - 1	A bundled package consisting of the following integrated modules; Schematic Capture, Printed Circuit Layout, and Gerber translator. It is recommended for the Mac II series, but can be utilized on a Mac Plus or Mac SE with a memory upgrade and a hard disk.
EDS - 2	A bundled package identical to EDS-1, except that the Schematic capture module is replaced with the Schematics - DS (digital simulation) module.
Trail Blazer	A powerful high-performance multilayer (up to 16) autorouter utilizing advanced Push & Shove in conjunction with Rip-up & Re-route algorithms. With its interactive editing and extensive user configuration control it is the Professional Designer's power design option for PCB-ST or EDS.
Tracker	An intermediate performance level double-sided autorouter utilizing advanced Push & Shove in conjunction with Rip-up & Re-route algorithms. The low cost design option for PCB-ST or EDS.
Gerber Translator	A package which converts any of the McCAD PCB databases into standard Gerber format for photo-plotting. This package is available as a complete stand-alone or as part of the EDS-1 or 2 package.
Gerber View	A "Universal CAD Bridge" which converts Gerber database files from other CAD systems into the McCAD printed circuit design database. This package also allows you to view Gerber files before they are photo-plotted.
PCB-1	An economical, easy to use, stand-alone package recommended for those generating circuit board artwork only. It is a complete stand-alone application and runs on all Apple Macintosh hardware.

Note: Unless otherwise stated the Minimum Hardware Configuration is Mac Plus. Two (2) Meg of RAM is strongly recommended for most applications. Both autorouters will require a 4 Meg machine. McCAD Trail Blazer will run on a SE but not a MacPlus. All McCAD software is configured for use with new ROMS. 9-90

Features in this publication are general features which cover the entire design environment. Stand-alone systems will contain only those features appropriate to the particular design environment and not necessarily all features found in the EDS environments.
All specifications subject to change without notice.